Conference Reports

Life Cycle Approaches for Green Investment

26th LCA Swiss Discussion Forum

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The 26th LCA Swiss Discussion Forum on Life Cycle Assessment took place on June 7th 2005 at the Swiss Federal Institute of Technology (EPFL) in Lausanne. This forum explored the topic of Green Investment, joining together Socially Responsible Investment (SRI) professionals and scientists working on the quantitative assessment of environmental impacts. The forum featured seven full as well as three short presentations. The three main objectives were: 1) to engage the dialogue between communities; 2) to get an overview of current practices in SRI; and 3) to pave the road towards more integrated quantitative frameworks by illustrating how life cycle approaches can be practically used in SRI. The 26th LCA Forum explored the following questions:

- What are the current qualitative and quantitative approaches on which SRI decisions are made?
- Does sustainability pay: is there a link between financial and environmental performance?
- How can life-cycle thinking provide the basis for assessing the environmental performance of companies and investment funds?
- How to get more leverage to reducing the environmental load from an investor perspective?

Forum Opening

In the introduction, Olivier Jolliet reminded the audience of what life cycle analysis is and how it can be one of the concrete building blocks of sustainable development. Citing an example from the banking industry, he showed that companies mainly address issues on the production site; however, a systemic view brings a clear advantage to target the relevant environmental load and image risks associated with a business. Jolliet also thanked the participants, coming from two different fields, for trying to combine their expertise and work together in a domain which is still in infancy.

1 Part 1: Basics of Investment and Investors Strategies

The first part of the day aimed at a better understanding of the motivations of investors and other actors of the SRI scene, and how green investors can influence companies.

1.1 How does green investment help promoting sustainable development?

Urs von Arx is researcher at the Institute of Economic Research (ETHZ). He first reminded the audience on the meaning of sustainable development, the triple-bottom-line principle and the unavoidable trade-offs between the social, economic and environmental objectives. He reviewed the diverse motives (profits, ethics and feel good) and forms (SRI, donations, private equity) of green investment and showed that environmental considerations are only one part of the coin. He emphasized that is more important to get involved in many steps of the decision process rather than ask, "What is the best way to act?"

He then proposed some results of a model based on a resource economics approach and looking at the driving forces of change. Objectives were to understand under which circumstances will some firms with polluting technology switch to clean technologies? The assumptions are that this change is linked to the abatement costs and the number of green investors. He showed that according to current costs, the number of green investors is not yet sufficient for promoting a large technological change.

1.2 Engagement and SRI strategy for long-term investors

Caroline Schum and Verena Butt are analysts at the Ethos Investment Foundation which executes fund management mandates for Swiss pension funds. They gave a general overview of the SRI market, which is growing more rapidly than the mainstream investment market and represents around 2.1% of total European pension fund equity holdings in 2003. They also commented on the contradictory results of the existing studies comparing the financial performances of SRI to non-SRI companies. Their rather positive conclusion was that a large potential still exists in Europe and that socially responsible companies are clearly not disadvantaged compared to others.

The Ethos approach to asset management is unique in Switzerland because, it goes beyond the simple investment in sustainable stocks by actively exercising shareholders rights (voting) and engaging into a constructive dialogue with companies' management. As a result, while having low direct impacts on the company management, they however increase awareness of what long term investors are expecting. This is crucially needed since, for example, 40% of the 26 biggest Swiss listed companies do not report about social and environmental issues.

2 Part 2: Evaluation of Environmental Performances at the Company Level

The second session skimmed the existing and potential strategies to assess the environmental performance of companies, looking at both the qualification and selection steps. The qualification step goes from evaluations based on purely qualitative indicators to quantitative ones and from physical to monetary approaches. The same diversity occurs during the selection step, which is either based on a company (best in class, best in function), portfolio or financial perspective.

2.1 Climate change and the Kyoto Protocol: Outlook for the investor

Francois Perrin is working at Lombard Odier Darier Hentsch. He presented a monetary approach that incorporates environmental costs into the financial valuation of a company. Such monetization is possible for environmental issues that are priced, which is the case of the CO_2 emissions in Europe since the beginning of 2005. The carbon market, based on a cap and trade system, aims at reducing CO_2 emissions at a minimal cost. The value-creation model presented takes into account investments, operational management and financing to assess the total exposure of companies to this new legislation and how it will influence their income stream and, ultimately, the value of investment.

The quality of environmental information is crucial for such a system. Financial disclosures related to climate change are therefore increasing and this should lead to a reduction of incoherencies and discrepancies of published CO_2 data. A second consequence of this market is that access to lower carbon intensity energy sources (gas, nuclear, renewable resources) has to be considered into the long-term strategic choices of corporations, modifying therefore the structure of the energy economy.

2.2 Life cycle assessment for green investment: Data quality, key impacts and benchmarking

Damien Friot presented how life cycle thinking could be used to quantitatively assess the environmental impacts of companies rather than relying on qualitative indicators, as it is currently the case. In this aim, main issues are to identify valid data sources, key environmental issues per sector and develop appropriated indicators for benchmarking corporate environmental performances.

Corporate data provided in environmental reports is of low reliability because of its incomplete coverage and its lack of specificity in terms of sector impacts. This data is therefore currently inappropriate for benchmarking and other sources should be used. Life cycle thinking can provide both validation methods for ensuring the progress of published data and verified data to identify key phases and key impacts along the life cycle or to act as benchmark. It appears that only a hybrid methodology, combining process and Input-Output LCA (IOLCA), together with other engineering and economic data is able to adequately cover the whole economic system and treat each sector specifically. Due to large uncertainties and emerging methodologies, a full quantitative benchmarking is, however, still to be developed and should currently only be used as a complement to a qualitative approach.

Environmental analysis of companies: A new approach

Yvan Maillard is analyst at Centre-Info, part of the SIRI Group. He presented the strategy of their new approach (in progress), developed following a collaboration with the Life Cycle System Group, EPFL. This change of paradigm: "from what companies say to what companies do" aims to focus on less criteria, taking advantages from quantitative indicators and knowledge of Input-Output and LCA. Three approaches are combined to assess companies according to the sector characteristics: 1) a functional unit approach; 2) a monetary approach ranking companies in function on their basket of products; and 3) a purpose approach ranking activities based on an ethical base.

2.3 Best in services approach for investors

Roby Tschopp demonstrated that the Nest pension fund is one of the rare funds adopting LCA as a core approach. Applying a best in service rather than a best in class approach, they compare companies providing services covering comparable needs, e.g. housing, clothing, transport or energy rather than companies from the same investment sector. This functional approach is rarely implemented: SRI funds mostly match the sector allocation of traditional fund and are therefore structured according to a financial perspective. A functional approach such as LCA accommodates however only with difficulty with a focus on a single investment sector.

3 Part 3: Evaluation of Environmental Performances at Portfolio/Fund Level

The third part of the day dealt with the evaluation of the performance of funds from a financial and environmental view and directed the discussion to more general issues of asset management from a portfolio perspective.

3.1 Integration of sustainable indicators into asset management

Christoph Butz started his speech by expressing how astonished he is that LCA specialists are still widely absent from the SRI scene. He added that while the shift to quantitative indicators in SRI will occur, the right modalities have still to be defined. Pragmatism and the search for unsophisticated and less numerous indicators should be the leading rules according to the different actors needs and to the questionnaire fatigue of companies.

BUTZ then explained the Pictet Quants strategy for selecting companies. Based on portfolio theory, their proprietary concept of the 'sustainable efficient frontier' uses information on sustainability both during the qualification of companies and the selection of titles. The inclusion of any company modifies therefore the risks of the whole portfolio and the objective is to maximize sustainability for a given risk profile. During the third part of the presentation, He described the links between SRI investment and the financial performance of companies. He showed that according to his research, SRI investing is rewarding provided some rules are respected. He also showed that, in terms of financial return, socially responsible companies beat environmentally friendly ones.

3.2 Input-Output LCA of socially responsible investment funds

THOMAS KOELLNER is working at the Swiss Federal Institute of Technology in Zurich. He exhibited an approach to assess the environmental impacts of equity funds and to compare the performance of SRI and regular funds. This study is motivated by the fact that there is a large overlap between both types of portfolios and a similar sector allocation.

KOELLNER first explained that some SRI funds are closer, in term of portfolio, to non-specified funds that from other SRI funds. He illustrated this issue by showing that differences of mean environmental ratings between regular and SRI funds are very small and that the distinction mainly consists in a small reduction of the weight of companies with low ratings. Regarding the environmental performance, he showed that, based on Input-Output analysis, SRI funds have however a reduced environmental impact. KOELLNER explained that environmental impacts are mainly driven by sector allocation and that company specific ratings are not so important, as verified with a sensitivity analysis. Sector/industries, not only companies, should therefore be taken into account in sustainability assessments.

3.3 Use of IO-LCA from the view of a fund manager

Care Group manages the first sustainable fund of funds for institutional investors in Switzerland. CORINE MOSER presented their mixed approach to select funds with the lowest environmental profile, following the methodology developed by KOELLNER. From a fund manager perspective, using Input-Output analysis offer the advantage to account for the supply chain and therefore to reflect the interdependency between sectors. Current limits are however that approximations are numerous because of the lack of information and sector mismatches, and that the use and disposal phases cannot be accounted for.

4 Part 4: Private Equity

Private equity is the direct investment in promising growth companies, which shares are not traded on the stock exchanges. It provides companies the capital required to develop expand or restructure.

4.1 FIDD: A green and socially responsible venture capital fund

FIDD (Fonds d'investissement en développement durable) is focusing on companies that develop and commercialize products and technologies that promote sustainable development. ANDREE-LISE METHOT showed how their methodology actively use life cycle thinking as an optimization tool to analyze companies and to orientate them into a direction that provides a double dividend, both in financial and environmental terms, e.g. by improving the product chain and corporate governance. Sitting at the board of companies and owning a considerable part of shares, they can act effectively and influence during the whole life cycle of the company and products.

4.2 New value AG: Ethical and environmental investing in a private equity company

SØREN BJØNNESS presented how ethics and environment are at the core of the New Value investment strategy. Based on a hypothesis of a positive correlation between ethics and profits, they make a qualitative analysis of companies and an evaluation of the ethical/environmental quality of their products/services, stakeholder-relationships and corporate governance to see if the company invested in is in line with New Value philosophy.

This presentation exemplified how the needs of professionals within the green investment market are diverse. Relations are much closer and monitoring easier when investing directly in small companies than when investing on the stock market. Focus is therefore less on monitoring than on the selection of pro-active and green-sensitive leaders.

Discussion and Conclusion

The final discussion dealt with three questions. How to compare sectors with totally different functional units? Since LCA is currently a static approach, how to measure performance changes over time? How to reach a larger public: by developing a practical tool assessing the environmental impacts of an existing portfolio or by developing SRI rankings? The discussion also showed the potential interest of developing an approach that assesses the marginal consequences and environmental effects of an investment.

The quality of exchanges during this forum proved the real added value of getting people from finance, SRI and LCA together. It is therefore worthwhile pursuing in this direction in the future.

More material, including all presentations given at the conference, can be found at http://texma.org/lcaforum/. The 27th Discussion Forum on LCA will take place the 17th of November in Zürich on the them of: LCA in industry, challenges and approaches to make it more practical. For more information please contact lcaforum@epfl.ch.